

A 1

caldophilic (75°C to above boiling water temperature). The stability and catalytic activity of enzymes are linked characteristics, and the ways of measuring these properties vary considerably. For industrial enzymes, stability and activity are best measured under use conditions, often in the presence of substrate. Therefore, cellulases that must act on process streams of cellulose must be able to withstand exposure up to thermophilic or even caldophilic temperatures for digestion times in excess of several hours.

Please replace the third full paragraph on page 15, beginning line 23, with the following paragraph:

A 2

Cellulases belong to the GH family of enzymes. Cellulases are produced by a variety of bacteria and fungi to degrade the beta-(1,4)-glycosidic bond of cellulose and to so produce successively smaller fragments of cellulose and ultimately produce glucose. At present, cellulases are found within at least 11 different GH families. Three different types of cellulase enzyme activities have been identified within these GH families: exo-acting cellulases which cleave successive disaccharide units from the non-reducing ends of a cellulose chain; endo-acting cellulases which randomly cleave successive disaccharide units within the cellulose chain; and β -glucosidases which cleave successive disaccharide units to glucose (J. W. Deacon, (1997) Modern Mycology, 3rd Ed., ISBN: 0-632-03077-1, 97-98).

A 3

At page 34, please replace lines 10-12 with the following:

GH6_Ace -ATHVDNPYAGATFFVNPyWAQEVQSEAANQTN-ATLAAKMRVYSTAVWMDRIA (SEQ ID NO: 9)
CBHA_Cfi APVHDNPYAGAQXVNPTWAASVNAAGRQSADPALAAMRTVAGQPTAVWMDRISAIT (SEQ ID NO: 10)
E3_Tfu PGGPTNPPTNPGEKVDNPFEGAKLYVNPVW-SAKAAAEPGGSAVANESTAVWLDRIGAIE (SEQ ID NO: 11)

A 4

At page 35, please replace lines 22-24 with the following:

Cel12A_SSP NQQICDRYGTIIQD-RYVVQNNRWGTSATQCINV-TGNG-FEITQADGSVPTN (SEQ ID NO: 12)
CelB_SLi DTTICEPFGTIIQG-RYVVQNNRWGSTAPQCVTA-TDTG-FRVTQADGSAPTN (SEQ ID NO: 13)
GH12_ACe CTPGPQNQNGVTSVQGDEYRVQTNEWNSSAQQCLTINTATGAWTVSTANFSGGTG (SEQ ID NO: 14)

REMARKS

The present paper is submitted as a complete response to the Notice mailed August 20, 2001. Applicants respectfully request that the present papers be made of record.